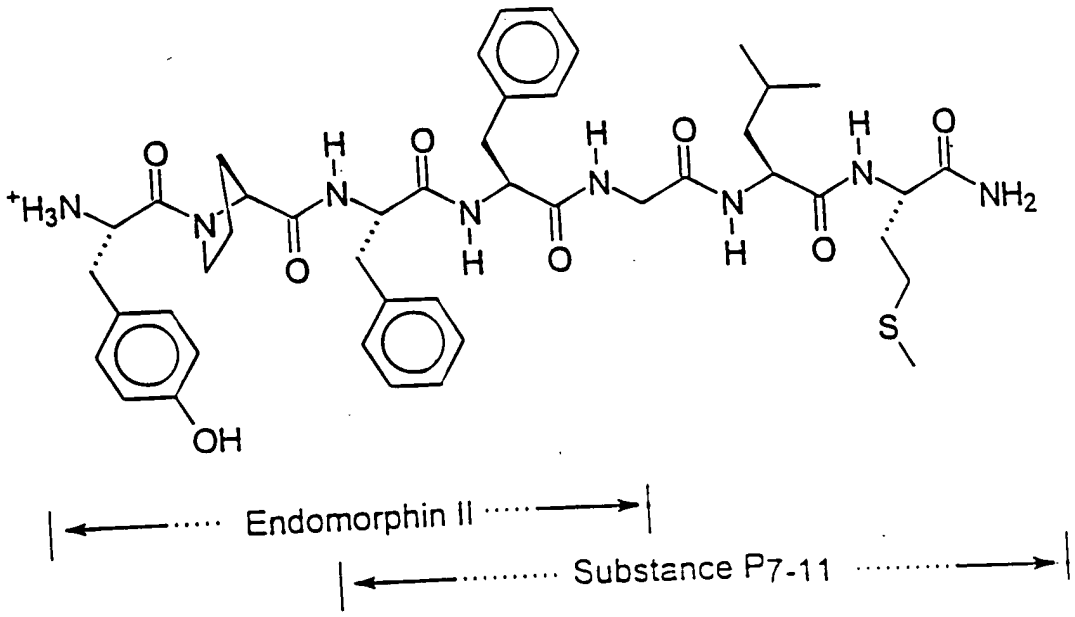
+H3N
O
N
O
H
N
O
N
H
O
H
N
O
H
N
O
NH2
S
OH
Endomorphin II
Substance P7-11

FIG. 1

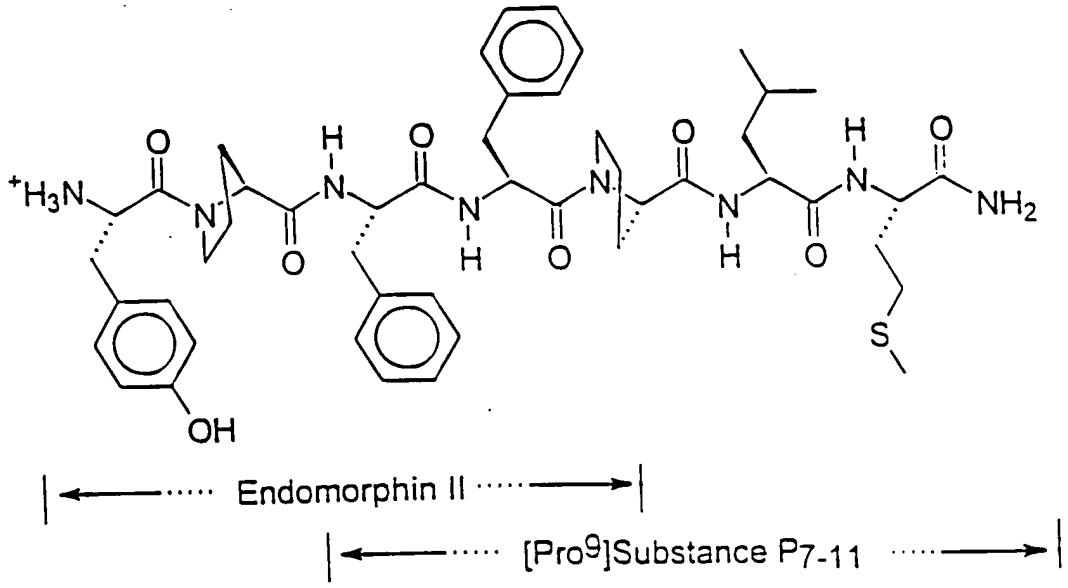
+H3N
O
N
H
N
O
O
N
H
O
N
O
O
N
H
O
N
H
O
NH2
OH
S
Endomorphin II
[Pro9]Substance P7-11

FIG. 2

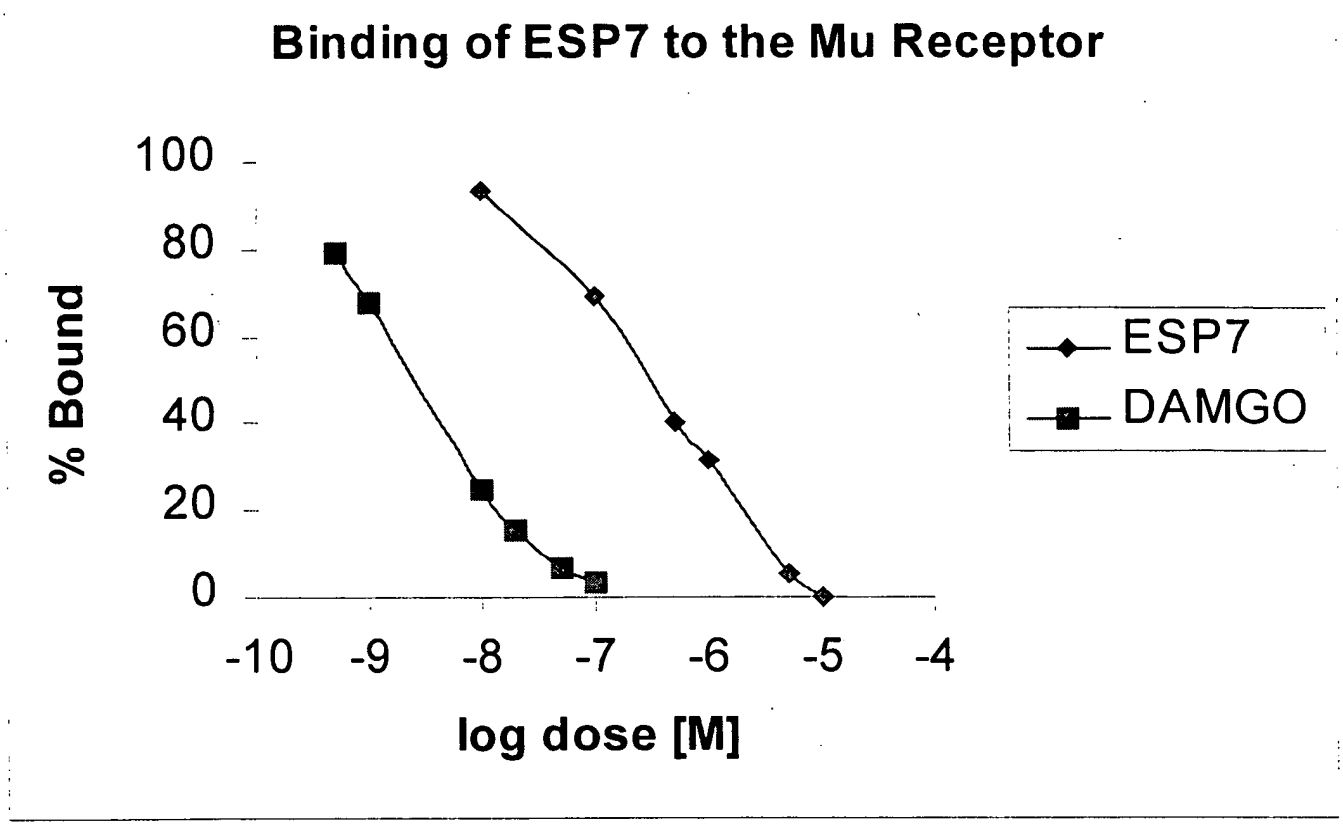
Binding of ESP7 to the Mu Receptor
% Bound
100
80
60
40
20
0
-10
-9
-8
-7
-6
-5
-4
log dose [M]
ESP7
DAMGO

Figure 3

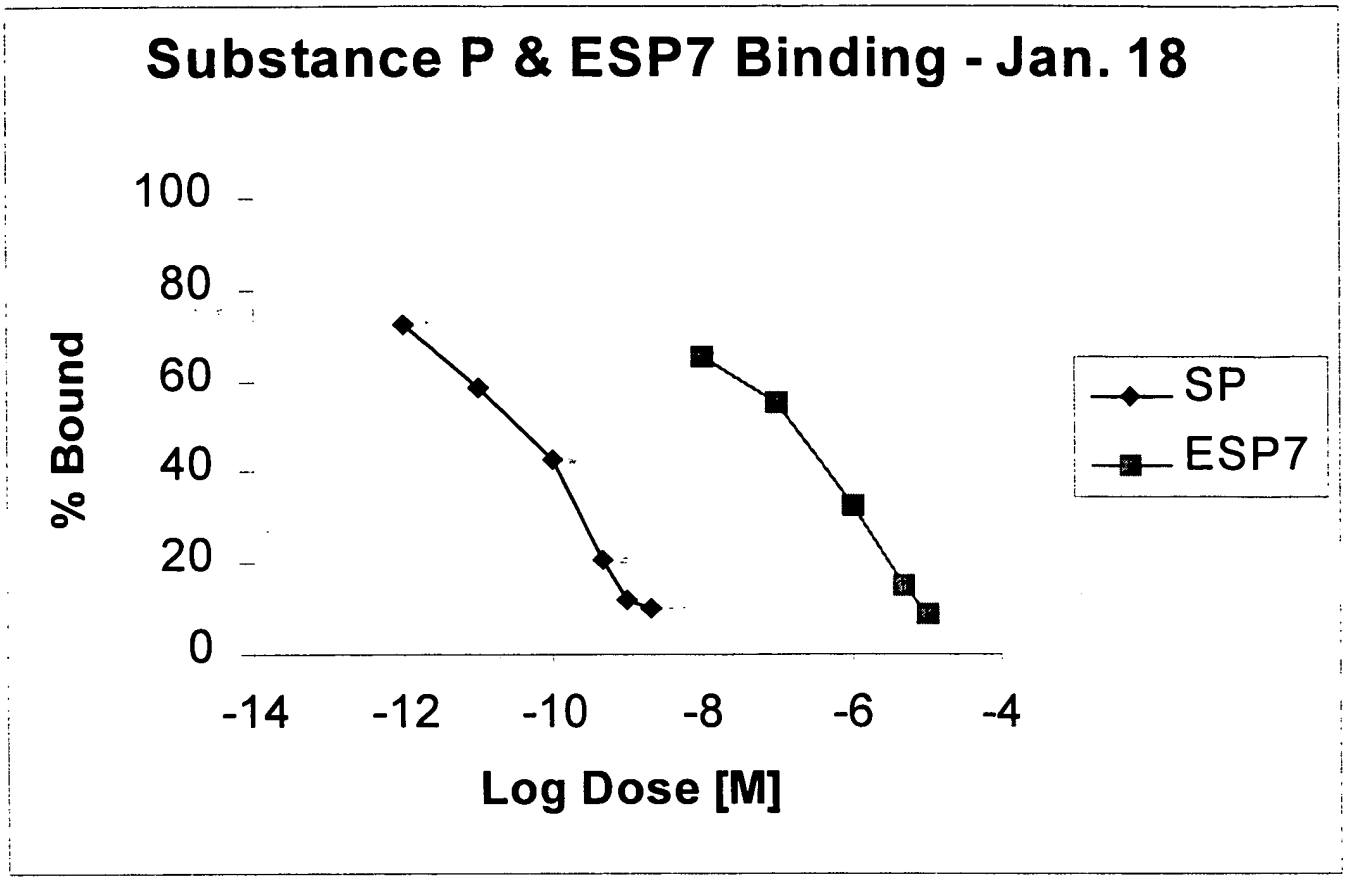
Substance P & ESP7 Binding - Jan. 18
100
80
60
40
20
0
% Bound
-14
-12
-10
-8
-6
-4
Log Dose [M]
SP
ESP7

Figure 4

Intrathecal Administration

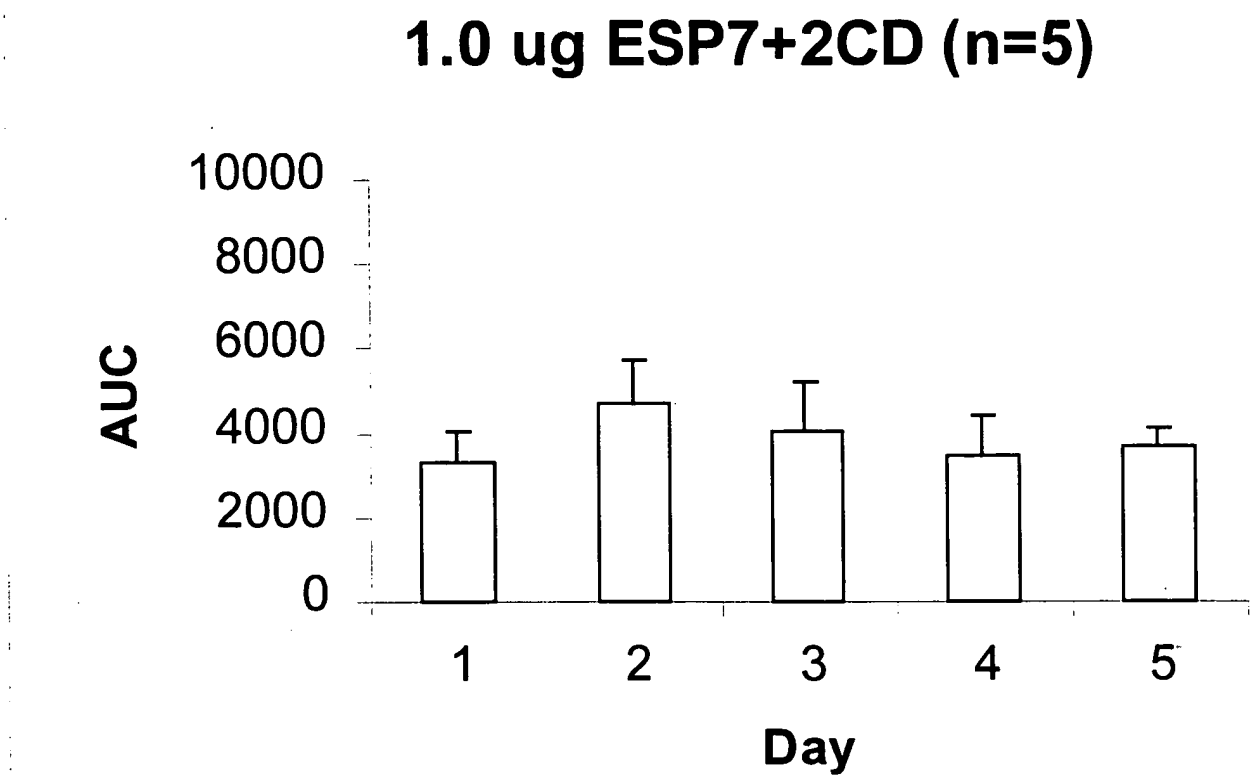


Figure 5.

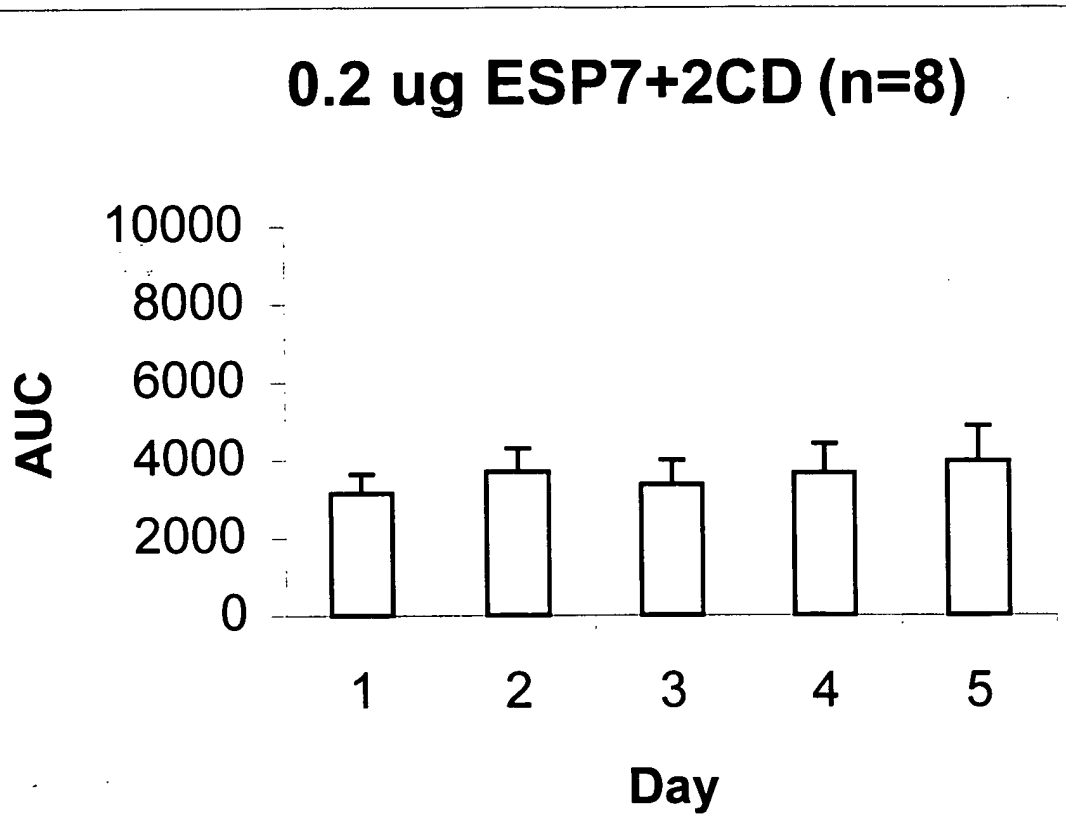


Figure 6

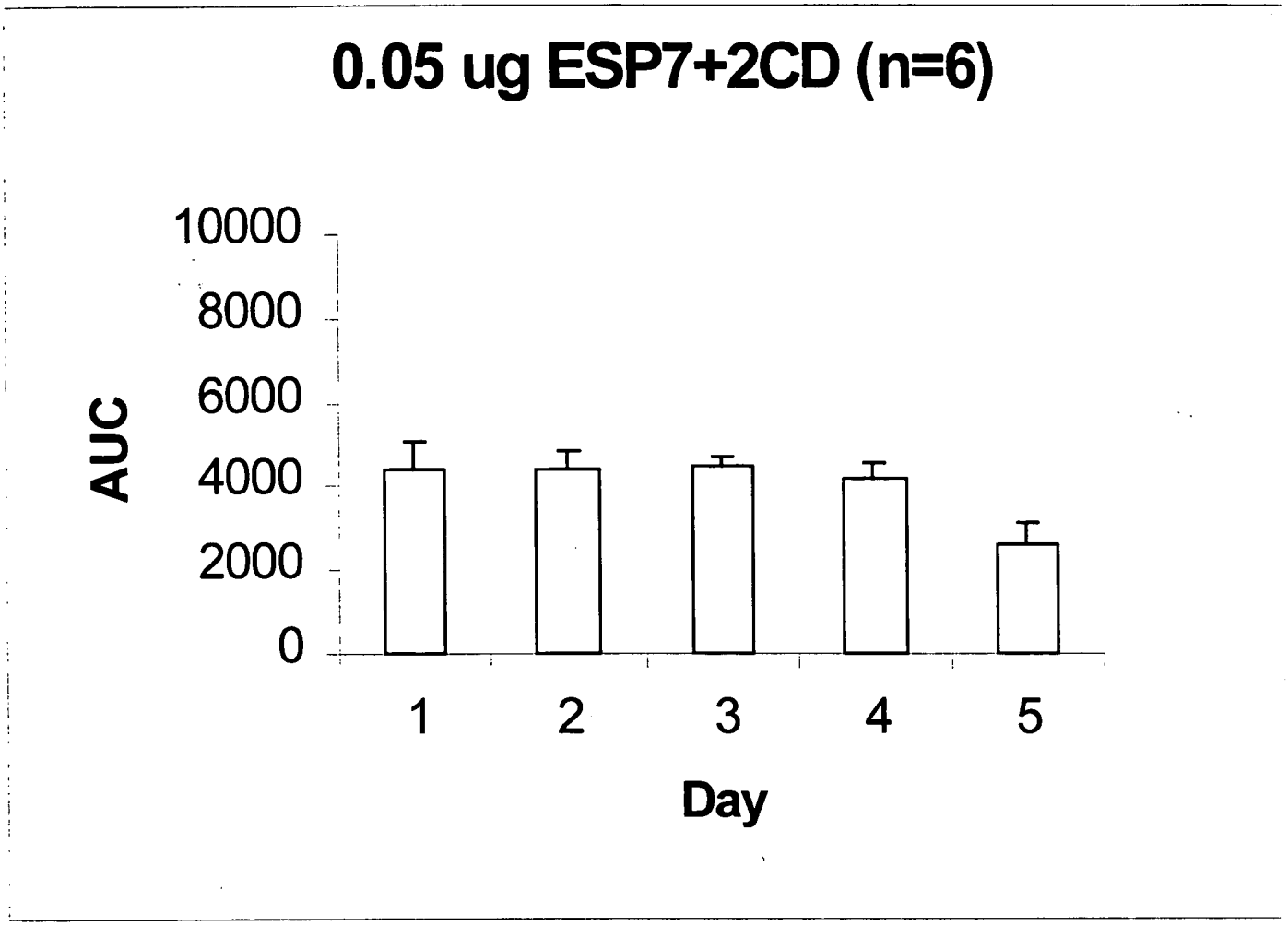


Figure 7

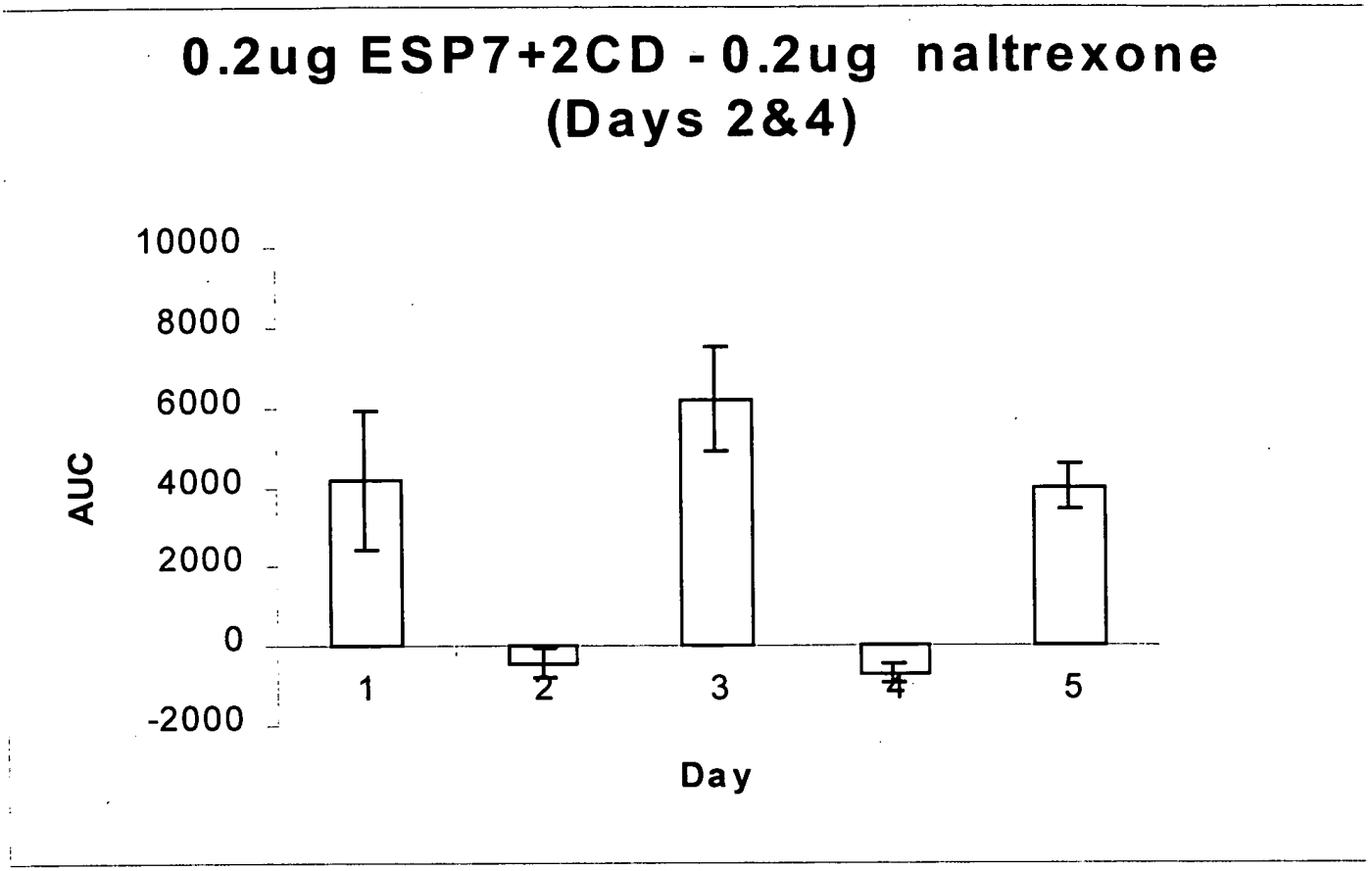
0.2ug ESP7+2CD - 0.2ug naltrexone
(Days 2&4)
10000
8000
6000
4000
2000
0
-2000
AUC
1
2
3
4
5
Day

Figure 8

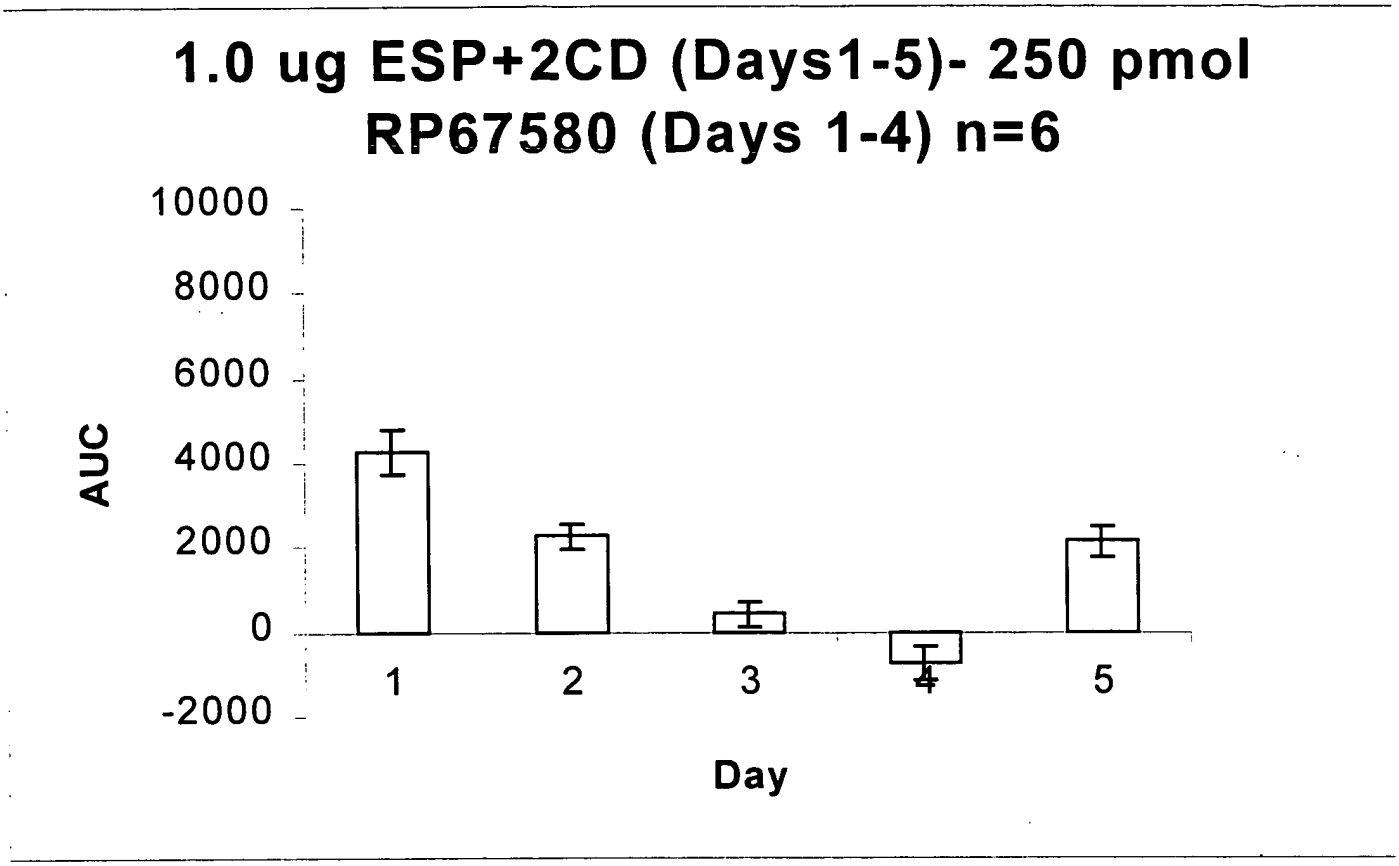
1.0 ug ESP+2CD (Days1-5)- 250 pmol
RP67580 (Days 1-4) n=6
10000
8000
6000
4000
2000
0
-2000
AUC
1
2
3
4
5
Day

Figure 9

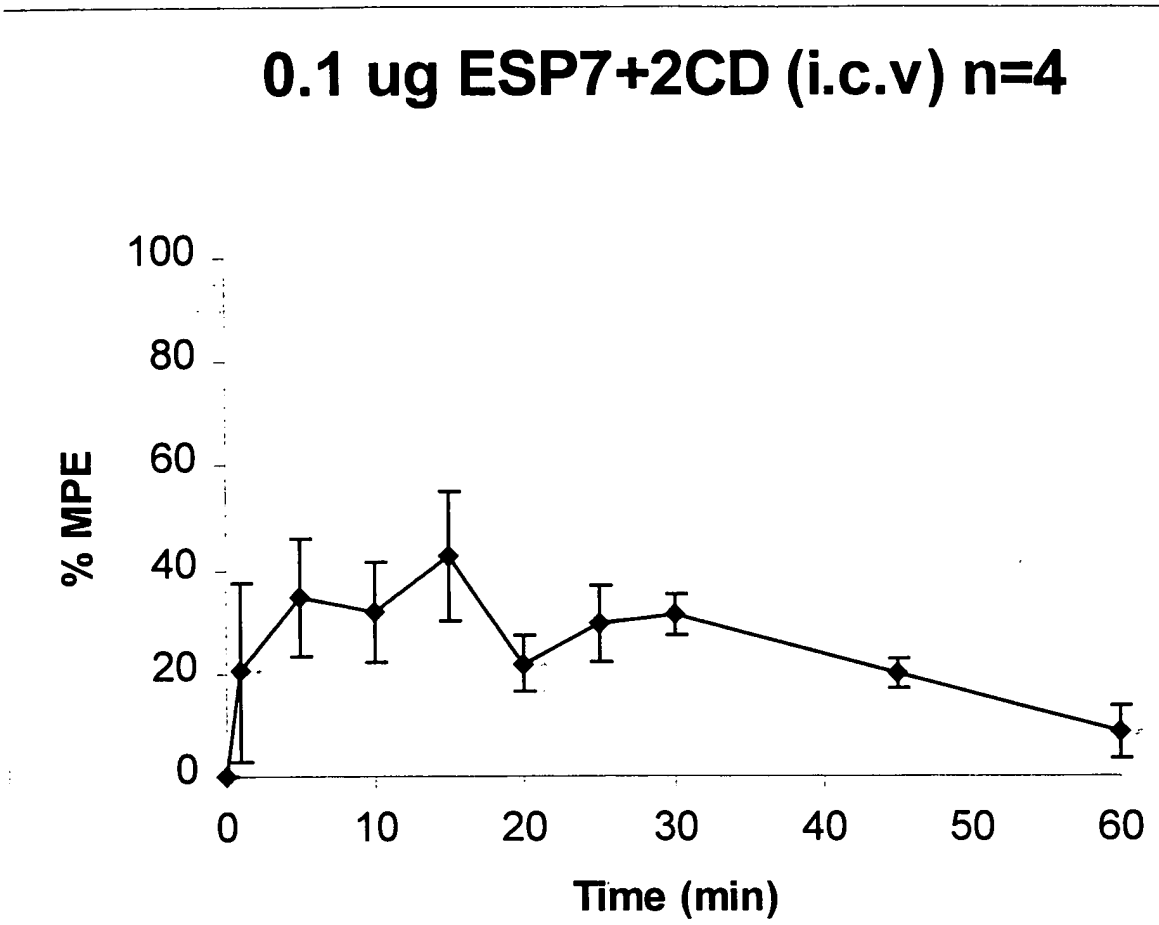
0.1 ug ESP7+2CD (i.c.v) n=4
100
80
60
40
20
0
% MPE
0
10
20
30
40
50
60
Time (min)

Figure 10

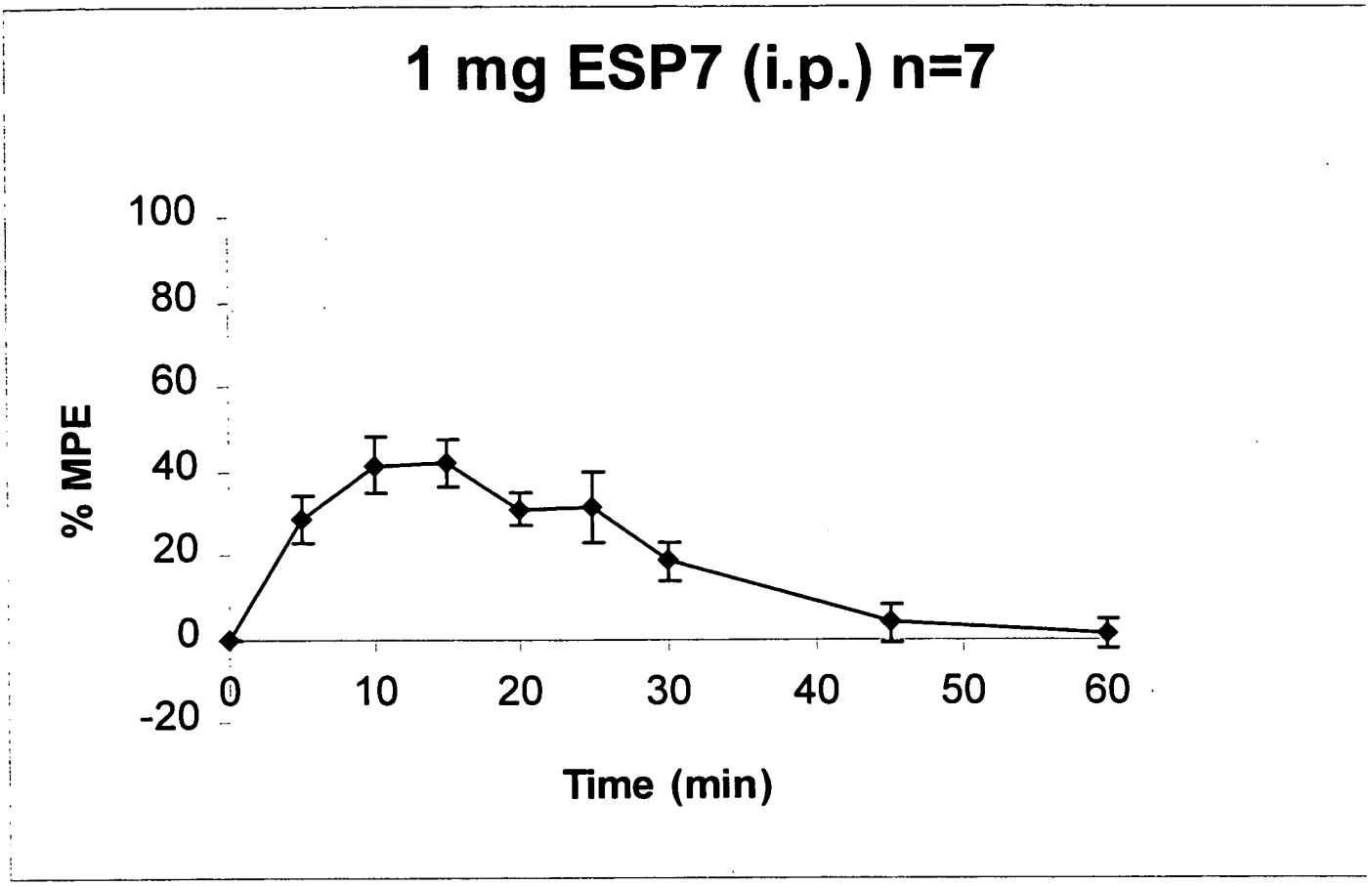


Figure 11